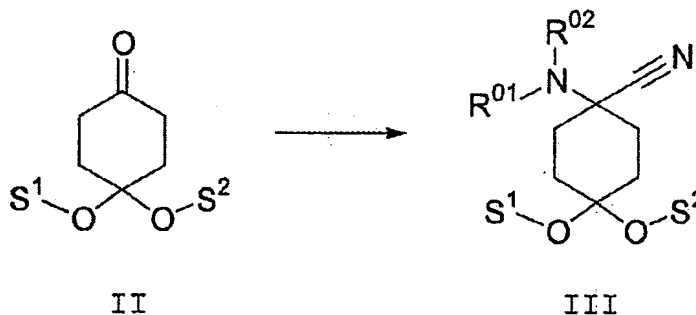


**Amendments to the Specification**

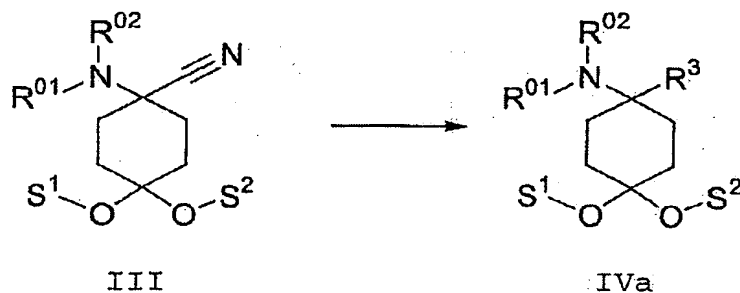
Please replace paragraph [0069] with the following amended paragraph:

[0069] A method comprising the following steps is particularly suitable:

- a. a cyclohexane-1,4-dione protected by the groups  $S^1$  and  $S^2$  according to formula II is reacted in the presence of a compound of formula  $HNR^{01}R^{02}$  with a cyanide, preferably potassium cyanide, to form a protected N-substituted 1-amino-4-oxo-cyclohexanecarbonitrile compound corresponding to formula III;

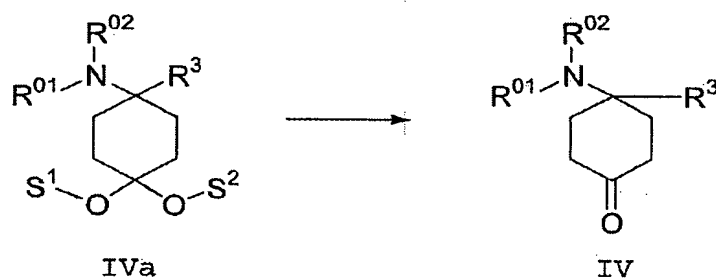


- optionally, the compound is then acylated, alkylated or sulfonated in any sequence and optionally repeatedly and/or, in the case of compounds where  $R^{01}$  and/or  $R^{02}$  and/or  $[[R^{06}]] \underline{R^6} = H$  protected by a protective group, a protective group is removed at least once and optionally acylated, alkylated or sulfonated and/or, in the case of a compound where  $R^{01}$  and/or  $R^{02}$  and/or  $[[R^{06}]] \underline{R^6} = H$ , a protective group is introduced at least once and optionally acylated, alkylated or sulfonated,
- b. the aminonitrile according to formula III is reacted with organometallic reagents, preferably Grignard or organolithium reagents, having the formula metal- $R^3$  to form a compound according to formula IVa;



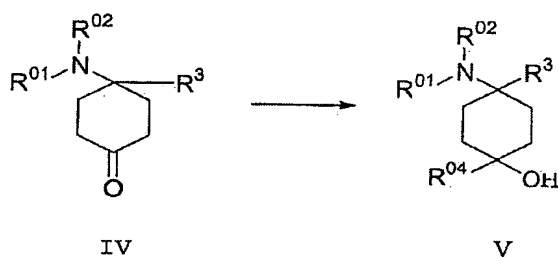
optionally, the compound is then acylated, alkylated or sulfonated in any sequence and optionally repeatedly and/or, in the case of compounds where  $R^{01}$  and/or  $R^{02}$  and/or  $[[R^{06}]] \underline{R^6} = H$  protected by a protective group, a protective group is removed at least once and optionally acylated, alkylated or sulfonated and/or, in the case of a compound where  $R^{01}$  and/or  $R^{02}$  and/or  $[[R^{06}]] \underline{R^6} = H$ , a protective group is introduced at least once and optionally acylated, alkylated or sulfonated,

- c. the protective groups  $S^1$  and  $S^2$  are removed according to formula III on the compound according to formula IVa to form a 4-substituted 4-aminocyclohexanone compound according to formula IV;



optionally, the compound is then acylated, alkylated or sulfonated in any sequence and optionally repeatedly and/or, in the case of compounds where  $R^{01}$  and/or  $R^{02}$  and/or  $[[R^{06}]] \underline{R^6} = H$  protected by a protective group, a protective group is removed at least once and optionally acylated, alkylated or sulfonated and/or, in the case of a compound where  $R^{01}$  and/or  $R^{02}$  and/or  $[[R^{06}]] \underline{R^6} = H$ , a protective group is introduced at least once and optionally acylated, alkylated or sulfonated,

- d. the 4-substituted 4-aminocyclohexanone compound according to formula IV is reacted with organometallic reagents, preferably Grignard or organolithium reagents, having the formula metal-R<sup>04</sup> to form a compound according to formula V;



optionally, the compound is then acylated, alkylated or sulfonated in any sequence and optionally repeatedly and/or, in the case of compounds where R<sup>01</sup> and/or R<sup>02</sup> and/or R<sup>04</sup> and/or R<sup>05</sup> and/or [[R<sup>06</sup>]] R<sup>6</sup> = H protected by a protective group, a protective group is removed at least once and optionally acylated, alkylated or sulfonated and/or, in the case of a compound where R<sup>01</sup> and/or R<sup>02</sup> and/or R<sup>04</sup> and/or R<sup>05</sup> and/or [[R<sup>06</sup>]] R<sup>6</sup> = H, a protective group is introduced at least once and optionally acylated, alkylated or sulfonated,

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> have the meaning given in claim 1

and

R<sup>01</sup> and R<sup>02</sup> independently of one another are selected from H; H provided with a protective group; respectively saturated or unsaturated, branched or unbranched, singly or multiply substituted or unsubstituted C<sub>1-8</sub>-alkyl or C<sub>3-8</sub>-cycloalkyl; respectively singly or multiply substituted or unsubstituted aryl or heteroaryl; or respectively singly or multiply substituted or unsubstituted aryl bound via C<sub>1-3</sub>-alkylene, C<sub>3-8</sub>-cycloalkyl or heteroaryl;

or the radicals R<sup>01</sup> and R<sup>02</sup> together form a ring and represent CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NR<sup>05</sup>CH<sub>2</sub>CH<sub>2</sub> or (CH<sub>2</sub>)<sub>3-6</sub>,

where R<sup>05</sup> is selected from H; H provided with a protective group; respectively saturated or unsaturated, branched or unbranched, singly or multiply substituted or unsubstituted C<sub>1-8</sub>-alkyl or C<sub>3-8</sub>-cycloalkyl; respectively singly or multiply substituted or unsubstituted aryl or heteroaryl; or respectively singly or multiply substituted or unsubstituted aryl bound via C<sub>1-3</sub>-alkylene, C<sub>3-8</sub>-cycloalkyl or heteroaryl;

R<sup>04</sup> is selected from H, H provided with a protective group; respectively unsubstituted or singly or multiply substituted C<sub>3-8</sub>-cycloalkyl, aryl or heteroaryl; -CHR<sup>6</sup>R<sup>7</sup>, -CHR<sup>6</sup>-CH<sub>2</sub>R<sup>7</sup>, -CHR<sup>6</sup>-CH<sub>2</sub>-CH<sub>2</sub>R<sup>7</sup>, -CHR<sup>6</sup>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>R<sup>7</sup>, -C(Y)R<sup>7</sup>, -C(Y)-CH<sub>2</sub>R<sup>7</sup>, -C(Y)-CH<sub>2</sub>-CH<sub>2</sub>R<sup>7</sup> or -C(Y)-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>R<sup>7</sup>; or -R<sup>8</sup>-L-R<sup>9</sup>

where Y = O, S or H<sub>2</sub>,

where R<sup>6</sup> is selected from

H, saturated or unsaturated, branched or unbranched, singly or multiply substituted or unsubstituted C<sub>1-7</sub>-alkyl;

and where R<sup>7</sup> is selected from

H; respectively unsubstituted or singly or multiply substituted C<sub>3-8</sub>-cycloalkyl, aryl or heteroaryl,

where R<sup>8</sup> is selected from

respectively unsubstituted or singly or multiply substituted aryl or heteroaryl,

where L is selected from

-C(O)-NH-, -NH-C(O)-, -C(O)-O-, -O-C(O)-, -O-, -S- or -S(O)<sub>2</sub>-

where R<sup>9</sup> is selected from

respectively unsubstituted or singly or multiply substituted aryl or heteroaryl,

and S<sup>1</sup> and S<sup>2</sup> independently of one another are selected from protective groups or together represent a protective group, preferably monoacetal.